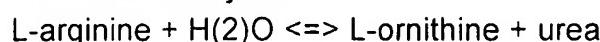


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for

NiceZyme View of ENZYME: EC 3.5.3.1

Official Name
Arginase.
Alternative Name(s)
Arginine amidinase.
Canavanase.
Reaction catalysed

Cofactor(s)
Manganese.
Comment(s)

Also hydrolyzes alpha-N-substituted L-arginines and canavanine.

Human Genetic Disease(s)
Argininemia MIM:207800

Cross-references
Biochemical Pathways;
map number(s) F8

PROSITE PDOC00135

BRENDA 3.5.3.1

PUMA2 3.5.3.1

PRIAM enzyme-specific profiles 3.5.3.1

Kyoto University LIGAND chemical database 3.5.3.1

IUBMB Enzyme Nomenclature 3.5.3.1

IntEnz 3.5.3.1

MEDLINE Find literature relating to 3.5.3.1

MetaCyc 3.5.3.1

P46637, ARGI1_ARATH;	P05089, ARGI1_HUMAN;	Q61176, ARGI1_MOUSE;
Q95JC8, ARGI1_PIG;	Q95KMO, ARGI1_RABBIT;	P07824, ARGI1_RAT;
P37818, ARGI1_SCHPO;	P30759, ARGI1_XENLA;	Q9ZPF5, ARGI2_ARATH;
Q58DL1, ARGI2_BOVIN;	P78540, ARGI2_HUMAN;	Q08691, ARGI2_MOUSE;
Q4VK78, ARGI2_RABIT;	O08701, ARGI2_RAT;	Q10066, ARGI2_SCHPO;
P14012, ARGI_AGRT5;	Q74ZW4, ARGI_ASHGO;	P53608, ARGI_BACCD;



ENZYME: 3.5.3.1

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Entry EC 3.5.3.1 **Enzyme**

Name arginase;
arginine amidinase;
canavanase;
L-arginase;
arginine transamidinase

Class Hydrolases
Acting on carbon-nitrogen bonds, other than peptide bonds
In linear amidines

Sysname L-arginine amidinohydrolase

Reaction L-arginine + H₂O = L-ornithine + urea
[RN:R00551]

Substrate L-arginine [CPD:C00062]
H₂O [CPD:C00001]

Product L-ornithine [CPD:C00077]
urea [CPD:C00086]

Comment Also hydrolyses alpha-N-substituted L-arginines and canavanine.

Pathway PATH: map00220 Urea cycle and metabolism of amino groups
PATH: map00330 Arginine and proline metabolism

Ortholog KO: K01476 arginase

Genes HSA: 383(ARG1) 384(ARG2)
MMU: 11846(Arg1) 11847(Arg2)
RNO: 29215(Arg2) 29221(Arg1)
SSC: 397115(ARG1)
XLA: 379198(MGC53991) 380109(arg1-prov) 397788(LOC397788)
XTR: 448358(arg1-prov)
DME: CG18104-PA(CG18104)
ATH: At4g08870(T3H13.10) At4g08900(T3H13.7)
SCE: YPL111W(CAR1)
AGO: AGR225C(AGR225Cp)
CAL: orf19.3934(CAR1)
SPO: SPAC3H1.07(arul) SPBP26C9.02c(carl)
CNE: CNG00550
TBR: Tb927.8.2020(Tb08.26N11.490)
LMA: LmjF35.1480
EHI: 6.t00005
XFA: XF1250
XFT: PD0517(roCF)
XCC: XCC3926(argI)
xcb: XC_4015
xcv: XCV4102(argI)
xac: XAC4009(argI)
xoo: XOO0435(argI)
psb: Psyr_2212
noc: Noc_1712
rso: RSc0158(RS01028)
reu: Reut_B4054
bpe: BP0538
bpa: BPP0749
bbi: BB0835